



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/382,438	08/25/1999	WILLIAM R. GARDNER	QCPA990482	5232

23696 7590 03/06/2003

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
San Diego, CA 92121-1714

EXAMINER

RYMAN, DANIEL J

ART UNIT PAPER NUMBER

2665

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/382,438

Applicant(s)

GARDNER ET AL.

Examiner

Daniel J. Ryman

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 19 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. As written, claim 19 depends upon itself. The examiner will base all prior art rejection on the interpretation that claim 19 depends upon claim 17.
2. Claim 20 is objected to because of the following informalities: it is not written in the form of a complete sentence. Claim 20 should end with a period. Appropriate correction is required.
3. Claim 21 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. As written, claim 21 depends upon itself. The examiner will base all prior art rejection on the interpretation that claim 21 depends upon claim 20.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.
5. Claims 18 and 19 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the

Art Unit: 2665

invention. Claims 18 and 19 disclose receiving and transmitting frequency bins; however, it is never specified what is doing the transmitting and receiving or the relationship between the transmitting and receiving. The examiner suggests changing claim 18 to read "receiving by a first device a communication ...; transmitting by a second device via a second reverse link..."

The examiner also suggests changing claim 19 to read "receiving by the first device an indication..."

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 13 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 13 recites the limitation "second reverse link" in line 4. There is insufficient antecedent basis for this limitation in the claim. Claim 13 depends upon claim 10 which does not cite a "second reverse link." Claim 11 cites a "second reverse link"; however, claim 13 does not depend upon claim 11. From the structure of the claim it appears that claim 13 should depend upon claim 11. The examiner, for the purposes of prior art rejections, will interpret the claim as depending upon claim 11 instead of claim 10.

9. Claim 21 recites the limitation "the plurality of forward link frequency bins" in line 2. There is insufficient antecedent basis for this limitation in the claim. As written, claim 21 depends upon itself. Since claim 21 appears to have been intended to depend upon claim 20, for the purposes of prior art rejections, the examiner will interpret claim 21 as depending upon claim 20.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 10-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tiedemann, Jr. (USPN 5,604,730) in view of Tiedemann, Jr. et al (USPN 6,335,922).

12. Regarding claim 10, Tiedemann (USPN '730) discloses a method in a wireless communication system (col. 4, lines 53-61), comprising: designating a multi-carrier forward link (forward CDMA channel) having a plurality of forward link frequency bins (forward packet channel) (Fig. 7 and col. 5, lines 16-26); designating a plurality of reverse link frequency bins (reverse packet channels) (Fig. 8 and col. 5, lines 27-38), wherein each of the plurality of forward link frequency bins has an associated reverse link frequency bin (col. 5, lines 35-45). A frequency bin is defined in the specification as "a 1.25 MHz band within a band class" (page 12, lines 6-7). Tiedemann (USPN '730) possibly does not expressly state that each frequency bin consists of a 1.25 MHz band within a band class. Tiedemann (USPN '922) discloses, in a wireless communication system, that it is well-known to have a forward packet channel consists of a 1.2288 MHz band within a band class (frequency spectrum) (col. 1, lines 49-62 and col. 2, lines 35-40) where since each code channel (traffic channel) is spread over a 1.2288 MHz band, each code channel (traffic channel) is a 1.2288 MHz band within the frequency spectrum. While the 1.288 MHz band is not exactly 1.25 MHz, the two bands are so approximately equal. It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize

the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been obvious to one of ordinary skill in the art at the time of the invention to vary the 1.288 MHz band to be 1.25 MHz, especially since it is well known in the art to add extra frequency spectrum around a range to guard against noise from other parts of the spectrum.

13. Regarding claim 11, referring to claim 10, Tiedemann in view of Tiedemann discloses selecting a first forward link frequency bin from the plurality of forward link frequency bins for forward link transmission (Tiedemann '730: col. 5, lines 16-45), the first forward link frequency bin having an associated first reverse link frequency bin (Tiedemann '730: col. 5, lines 16-45 esp. col. 5, lines 31-38); and selecting a second reverse link frequency bin for reverse link transmission corresponding to the forward link transmission wherein the second reverse link frequency bin is different from the first reverse link frequency bin (Tiedemann '730: col. 5, lines 16-45 esp. col. 5, lines 31-38).

14. Regarding claim 12, referring to claim 11, Tiedemann in view of Tiedemann discloses that the selecting a second reverse link frequency bin is based on loading of the system (Tiedemann '730: col. 5, lines 16-45 esp. col. 5, lines 31-38) where if one or more reverse links can be associated with a forward channel, if each reverse link is used exclusively by a mobile

Art Unit: 2665

radio while in a cell (Tiedemann '730: col. 5, lines 40-45), and if channels are deallocated when not in use (Tiedemann '730: col. 1, lines 48-58), then it is obvious that reverse links are assigned to a forward channel when there is heavy loading (increased number of mobile radios in a cell) and are deallocated when the loading decreases (lower number of mobile radios in a cell).

15. Regarding claim 13, referring to claim 11, Tiedemann in view of Tiedemann discloses selecting a third reverse link frequency bin for reverse link transmission corresponding to the forward link transmission, wherein the third reverse link frequency bin is different from the first and second reverse link frequency bins (Tiedemann '730: col. 5, lines 16-45 esp. col. 5, lines 31-38) where if one or more reverse links can be associated with a forward channel, if each reverse link is used exclusively by a mobile radio while in a cell (Tiedemann '730: col. 5, lines 40-45), and if channels are deallocated when not in use (Tiedemann '730: col. 1, lines 48-58), then it is obvious that reverse links are assigned to a forward channel when there is heavy loading (increased number of mobile radios in a cell) and are deallocated when the loading decreases (lower number of mobile radios in a cell).

16. Regarding claim 14, referring to claim 10, Tiedemann in view of Tiedemann possibly does not expressly disclose that the plurality of forward link frequency bins comprise three frequency bins. However, it is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d

Art Unit: 2665

849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Tiedemann discloses using N frequency bins. Defining this N to be three would have been obvious absent a showing of criticality.

17. Regarding claim 15, referring to claim 10, Tiedemann in view of Tiedemann discloses that the plurality of forward link frequency bins are adjacent frequency bins (Tiedemann '730: Fig. 8 and col. 5, lines 16-26 and Tiedemann '922: col. 1, lines 49-62 and col. 2, lines 35-40) where since the channels are transmitted in the same frequency band but with different spreading codes (Tiedemann '922: col. 1, lines 49-62 and col. 2, lines 35-40), the channels, as broadly defined, are adjacent since adjacent can mean "not distant."

18. Regarding claim 16, referring to claim 11, Tiedemann in view of Tiedemann discloses that the multi-carrier forward link (forward CDMA link) is adapted for transmission of a plurality of code channels (Tiedemann: '730: col. 5, lines 16-26 and Tiedemann '922: col. 1, lines 49-62 and col. 2, lines 35-40), wherein one of said plurality of code channels is used to communicate power control information for said second reverse link frequency bin (Tiedemann '730: col. 6, lines 56-61) where a code channel and a frequency bin are equivalent.

19. Regarding claim 17, Tiedemann (USPN '730) discloses a method in a wireless communication system (col. 4, lines 53-61), comprising: receiving communications on a multi-carrier forward link (forward CDMA channel), the multi-carrier forward link having a plurality of forward link frequency bins (forward packet channel) (Fig. 7 and col. 5, lines 16-26), wherein each of the plurality of forward link frequency bins has an associated reverse link frequency bin (col. 5, lines 35-45). A frequency bin is defined in the specification as "a 1.25 MHz band within a band class" (page 12, lines 6-7). Tiedemann (USPN '730) possibly does not

Art Unit: 2665

expressly state that each frequency bin consists of a 1.25 MHz band within a band class.

Tiedemann (USPN '922) discloses, in a wireless communication system, that it is well-known to have a forward packet channel consists of a 1.2288 MHz band within a band class (frequency spectrum) (col. 1, lines 49-62 and col. 2, lines 35-40) where since each code channel (traffic channel) is spread over a 1.2288 MHz band, each code channel (traffic channel) is a 1.2288 MHz band within the frequency spectrum. While the 1.288 MHz band is not exactly 1.25 MHz, the two bands are so approximately equal. It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been obvious to one of ordinary skill in the art at the time of the invention to vary the 1.288 MHz band to be 1.25 MHz, especially since it is well known in the art to add extra frequency spectrum around a range to guard against noise from other parts of the spectrum.

20. Regarding claim 18, referring to claim 17, Tiedemann in view of Tiedemann discloses receiving a communication on a forward link frequency bin (Tiedemann '730: col. 5, lines 16-45), the forward link frequency bin having an associated first reverse link frequency bin (Tiedemann '730: col. 5, lines 16-45); transmitting via a second reverse link frequency bin,

Art Unit: 2665

wherein said second reverse link frequency bin is different from the first reverse link frequency bin (Tiedemann '730: col. 5, lines 16-45 esp. col. 5, lines 31-38).

21. Regarding claim 19, referring to claim 17, Tiedemann in view of Tiedemann discloses receiving an indication of a reverse link frequency bin (Tiedemann '730: col. 5, lines 31-39) where the overhead message contains an indication of a reverse frequency bin.

22. Regarding claim 20, Tiedemann (USPN '730) discloses an apparatus in a wireless communication system (col. 4, lines 53-61), comprising: means for transmitting information on a multi-carrier forward link (forward CDMA channel) (Fig. 7 and col. 5, lines 16-26), wherein said multi-carrier forward link comprises a plurality of forward link frequency bins (forward packet channel) (Fig. 7 and col. 5, lines 16-26); and means for designating a reverse link frequency bin associated with each of said plurality of said forward link frequency bins (col. 5, lines 35-45). A frequency bin is defined in the specification as "a 1.25 MHz band within a band class" (page 12, lines 6-7). Tiedemann (USPN '730) possibly does not expressly state that each frequency bin consists of a 1.25 MHz band within a band class. Tiedemann (USPN '922) discloses, in a wireless communication system, that it is well-known to have a forward packet channel consists of a 1.2288 MHz band within a band class (frequency spectrum) (col. 1, lines 49-62 and col. 2, lines 35-40) where since each code channel (traffic channel) is spread over a 1.2288 MHz band, each code channel (traffic channel) is a 1.2288 MHz band within the frequency spectrum. While the 1.288 MHz band is not exactly 1.25 MHz, the two bands are so approximately equal. It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32

Art Unit: 2665

USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). It would have been obvious to one of ordinary skill in the art at the time of the invention to vary the 1.288 MHz band to be 1.25 MHz, especially since it is well known in the art to add extra frequency spectrum around a range to guard against noise from other parts of the spectrum.

23. Tiedemann in view of Tiedemann (Tiedemann '730:) (Tiedemann '922:)

Regarding claim 21, referring to claim 20, Tiedemann in view of Tiedemann discloses means for selecting a first forward link frequency bin from the plurality of forward link frequency bins for forward link transmission (Tiedemann '730: col. 5, lines 16-45), the first forward link frequency bin having an associated first reverse link frequency bin (Tiedemann '730: col. 5, lines 16-45 esp. col. 5, lines 31-38); and means for selecting a second reverse link frequency bin for reverse link transmission corresponding to the forward link transmission wherein the second reverse link frequency bin is different from the first reverse link frequency bin (Tiedemann '730: col. 5, lines 16-45 esp. col. 5, lines 31-38).

Response to Arguments

24. Applicant's arguments with respect to claims 10-21 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2665

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (703)305-6970. The examiner can normally be reached on Mon.-Fri. 7:00-5:00 with every other Friday off.

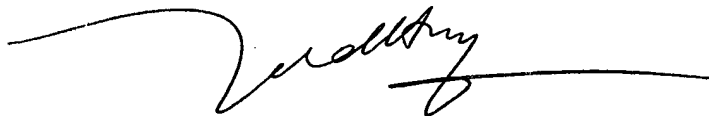
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (703)308-6602. The fax phone numbers for the organization where this application or proceeding is assigned are (703)308-6743 for regular communications and (703)308-9051 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-3900.

Daniel J. Ryman
Examiner
Art Unit 2665

DJR

Daniel J. Ryman
February 28, 2003



**HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**